<u>REMARKS</u>

Claims 1 - 4 and 37 stand rejected under 35 USC 112 because it is alleged that they contain functional language not supported by recitation of structural limitations. In this regard, the structure is defined in Claim 1 or in Claim 37, for example, in terms of "means plus function" language for various elements rather than in terms of structural language. This is clearly permitted under 35 USC 112. For example, the Examiner points to the limitations under the "element selection logic means". These limitations include means "for determining a class of each function" and "for causing the instruction to be executed by those of said elements ... affecting the instruction execution in optimum manner". These two functional clauses are used rather than structural limitations because of the great economy of the language achieved thereby. Indeed, this is the purpose in 35 USC 112 permitting various elements in a claim to be described in terms of "means plus function" language. Accordingly, reconsideration of the rejection of Claims 1 - 4 and 37 under 35 USC 112 is respectfully requested in view of the foregoing quoted language.

Claims 1 - 4, 11, 12, 19 - 22, 37 and 38 stand rejected under 35 USC 103 over Gordon (U.S. Patent 4,172,281). The office action alleges that Gordon teaches classifying each function performed by a micro-instruction in order execute the instruction in optimum manner. What Gordon teaches is that each function performed by a micro-instruction is classified in accordance with **the amount of time that the function occupies the processor.** Gordon teaches that the micro-instruction cycle time is varied in accordance with the amount of time predicted to be taken for each micro-instruction. For this purpose, Gordon teaches that all of the micro-instructions are performed by the same microprocessor. **No mention is made in Gordon of selecting different logic elements to perform different instruction in accordance with**

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which logic element can do so with the greatest efficiency.
However, this is the very point of the limitation in Claim 1,
for example, "causing the instruction to be executed by those
of said elements which perform those of said logical sequences
affecting the instruction execution in an optimum manner".
Gordon has nothing to do with selecting different logic
elements to perform different functions or instructions.
Presumably, in Gordon the same logic elements perform various
instructions without regard to any optimization. The only
thing that changes in Gordon is the micro-instruction cycle
time.

It may be that the Examiner was considering the ability
of Gordon to directly access different input/output devices to
Gordon's microprocessor to bypass the usual input/output
protocol delays. However, such devices have nothing to do
with the execution in the microprocessor of various micro-
instruction as they do not perform in that execution. They
certainly have nothing to do with Gordon's teaching of
classifying each micro-instruction (in accordance with the
amount of time it consumes). In the applicant's invention the
classification of each instruction is directly related to the
selection of the optimum logic elements to perform the
instruction.

In summary, Gordon has nothing to do with selecting
different logic elements to perform various functions of
micro-instructions. All that Gordon teaches is that the
micro-instruction cycle may be varied to accommodate the
longer and shorter cycle times consumed by different micro-
instructions. This has nothing to do with the present
invention. Accordingly, reconsideration of the rejection of
Claims 1 - 4, 11, 12, 19 - 22, 37 and 38 under 35 USC 103 is
respectfully requested based upon the claim language, "causing
the instruction to be executed by those of said elements which
perform those of said logical sequences affecting the
instruction execution in an optimum manner".

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Claims 39 - 41 stand rejected under 35 USC 103 over
Gordon in view of McAulay. As pointed out in applicant's
response to the previous office action, McAulay has nothing to
do with changing the selection of logic elements to perform
various micro-instruction functions during the running of the
algorithm, and therefore has nothing to do with applicant's
invention. As previously pointed out, Gordon has nothing to
do with changing the logic elements to perform various micro-
instruction functions, and merely teaches the variation of the
micro-instruction cycle time to accommodate different micro-
instructions. Therefore, the combination of Gordon and
McAulay cannot possibly have anything to do with applicant's
invention. Therefore, reconsideration of the rejection of
Claims 39 - 41 is respectfully requested based upon the
language, for example, "causing the instruction to be executed
by those of said elements which perform those of said logical
sequences affecting the instruction operation in an optimum
manner".

In summary, all the pending claims are patentable over
the cited art, including Claims 1 - 4, as well as Claim 39
corresponding to Claim 5. Accordingly, allowance thereof at
the earliest possible opportunity is respectfully requested.
It is the applicant's understanding that "if Claims 1 - 5 are
subsequently found to be allowable, the question of rejoinder
(of Claims 6 - 10, 14 - 18 and 24 - 36) will be considered."
Therefore, it is respectfully requested that Claims 6 - 10, 14
- 18 and 24 - 36 be rejoined with the present claims in the
above-identified patent application. These claims are
directed to corresponding subject matter and it is felt that
the restriction requirement should be lifted.

Therefore, in view of the foregoing amendment and these
remarks, it is applicant's belief that this application is now
in condition for allowance and for rejoinder of the withdrawn
claims. Favorable reconsideration in the form of an early

Notice of Allowance is courteously solicited. Applicant's attorney would welcome a telephone call from the Examiner to discuss any questions.

Respectfully submitted,

By _____

Robert M. Wallace
Attorney for Applicant
Registration No. 29,119
Telephone No. 716/586-1730

(805) 644-4035